

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) ~~An~~ A coil assembly body structure for an electrodeless discharge lamp, comprising:

an airtight container bulb ~~made~~ of a transparent material and enclosing a discharge gas; and

a coil assembly body contained in a hollow portion provided in the airtight container bulb, for generating a high frequency electromagnetic field by conducting a high frequency current in a coil to excite the discharge gas so as to emit light,

wherein the coil assembly body comprises:

a pipe-shaped cylinder ~~formed~~ of a thermal conductor for heat release;

a skeleton-shaped bobbin of a substantially cylindrical shape that includes a side surface and mounted on an outer surface of the pipe-shaped cylinder along an axial direction of the pipe-shaped cylinder, the skeleton-shaped bobbin including an opening extending radially through the skeleton-shaped bobbin at the side surface of the substantially cylindrical shape;

a core ~~made~~ of a soft magnetic material provided at ~~[[an]]~~ the opening ~~formed by the skeleton of the~~ of skeleton-shaped bobbin and being in substantial surface contact with the cylinder; and

a coil wound around a surface of the skeleton-shaped bobbin and the core.

2. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 1, wherein the skeleton-shaped bobbin of the coil assembly body ~~is made of~~ comprises resin, wherein ~~when referring to~~ a part of the skeleton-shaped bobbin positioned ~~back in the cavity as a~~ hollow portion comprises a bobbin upper part, ~~and referring to its part and~~ a part of the skeleton-shaped bobbin positioned at an opening portion of the hollow portion ~~[[as]]~~ comprises a bobbin lower part, the skeleton-shaped bobbin further comprises: a substantially doughnut-shaped upper collar; at least two pillar portions extending in a direction from ~~this~~ the substantially doughnut-shaped upper collar to the bobbin lower part; and a cylindrical lower collar supporting ~~these~~ the pillar portions and extending to ~~[[be]]~~ the bobbin lower part, ~~in which~~ wherein the substantially doughnut-shaped upper collar, the pillar portions and the cylindrical lower collar support the core and the coil.

3. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 2, wherein at least one of the collars of the skeleton-shaped bobbin is positioned facing an end of the core, and at least one of the collars protrudes further than a thickness of the core, or protrudes further than a maximum diameter of the coil, in a radial direction of the ~~coupler~~ coil assembly body.

4. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 2, wherein the pillar portions and the cylindrical lower collar of the skeleton-shaped bobbin are partially provided with a groove ~~formed to contain~~ configured to receive a lead line of the coil.

5. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 4, the groove includes a fixation rib provided on an inner wall of the groove ~~wherein in order~~ to fix the lead line of the coil contained in the groove ~~formed provided in the skeleton-shaped bobbin, the groove has a rib for fixation formed on an inner wall thereof.~~

6. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 4, wherein the groove ~~formed provided~~ in the skeleton-shaped bobbin is partially provided with a notch ~~formed~~ to fix a beginning of winding of the coil, and to insulate the coil from the core.

7. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 4, wherein an insulating tape is wrapped around a periphery of the core, and the coil is wound thereon, while one of a conical and an angular prismatic rib for bending and fixing the lead line is ~~formed provided~~ on a pillar portion of the skeleton-shaped bobbin adjacent to the groove at a beginning of the winding of the coil.

8. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 4, wherein a step is ~~formed provided~~ on a pillar portion of the skeleton-shaped bobbin between a length dimensions dimension of walls forming the groove of the pillar portion in order to bend and ~~contain~~ receive, in the groove, the lead line at an end of the winding of the coil.

9. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 2, wherein the airtight container bulb has an air exhausting pipe in the cavity hollow portion , and

a projection having a slope, which ~~serves as~~ comprises a guide ~~when~~ for mounting the coil assembly body in the cavity hollow portion of the bulb, is ~~formed~~ provided at the substantially doughnut-shaped upper collar of the skeleton-shaped bobbin.

10. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 2, wherein notch windows are ~~formed~~ provided on a cylindrical surface of the cylindrical lower collar of the skeleton-shaped bobbin, while convex portions are ~~formed~~ provided at corresponding positions of the pipe-shaped cylinder, in which the notch windows and the convex portions are ~~formed~~ provided in pairs, and their respective width dimensions are different.

11. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 2, wherein:

the cylindrical lower collar of the skeleton-shaped bobbin has a terminal box provided on a cylindrical outer periphery thereof;

terminals ~~are inserted~~ extend into and out of ~~from~~ both sides of the terminal box in a circumferential direction so as to electrically connect the lead line of the coil to a lamp cable; and

an insertion direction of the lamp cable is opposite to ~~an insertion~~ a pulling out direction of the cable.

12. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 2, wherein the skeleton-shaped bobbin is provided with a base receiver which passes therethrough and is mounted thereon, and

~~this~~ the base receiver has a hole ~~formed~~ provided on an upper surface thereof for being rotationally fitted ~~rotational fit~~ to a base of the airtight container bulb.

13. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 1, wherein the core ~~is-formed~~ comprises [[of]] a ferrite core divided ~~left and right~~ radially, and having flat portions on a rear thereof.

14. (Currently Amended) The coil assembly body structure for an electrodeless discharge lamp according to claim 1, wherein the core protrudes upward further than the pipe-shaped cylinder at an upper part of the coil assembly body.

15. (New) The coil assembly body structure for an electrodeless discharge lamp according to claim 1, the skeleton-shaped bobbin comprising a substantially circular upper collar and a substantially circular lower collar, a plurality of pillar portions extending between the substantially circular upper and lower collars, an area between the substantially circular upper and lower collars and between adjacent pillar portions defining the opening.

16. (New) The coil assembly body structure for an electrodeless discharge lamp according to claim 1, the skeleton-shaped bobbin comprising a hollow cylindrical member and the opening comprising a majority of the surface area of the hollow cylindrical member.

17. (New) The coil assembly body for an electrodeless discharge lamp according to claim 1, the core being configured to cover the opening of the skeleton-shaped bobbin.

18. (New) The coil assembly body for an electrodeless discharge lamp according to claim 1, the coil being positioned outwardly of the core and of the skeleton-shaped bobbin.

19. (New) The coil assembly body for an electrodeless discharge lamp according to claim 1, the skeleton-shaped bobbin configured to support the core.

20. (New) The coil assembly body structure for an electrodeless discharge lamp according to claim 1, the core being configured to support the coil.